

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. **(CURRENTLY AMENDED)** A method of transforming an *Allium* genus plant comprising the following steps:

(a) transforming embryo cells of the *Allium* genus plant with DNA sequences via a vector or direct gene transfer to produce transformed plant material, wherein transformation is achieved by:

(i) ~~transferring embryo tissue into a preparation of~~ wounding the embryo cells and transferring embryo cells into a suspension of *Agrobacterium*,

(ii) transferring the ~~embryos~~ embryo cells from step (i) to a culture medium;

(iii) co-cultivating the embryo cells and the *Agrobacterium* attached to the embryo cells for a period of 1-12 days from the end of step (ii);

(b) selecting ~~[[the]]~~ transformed plant material derived from step (a), by transferring the embryo cells to a selection medium containing the appropriate selection agents to kill the agrobacteria and preferentially grow the transgenic embryo cells to produce transformed plant cells material;

(c) culturing the ~~tissues from (b) to produce secondary embryos and regenerating the transformed plant material~~ transformed plant material from (b) to produce secondary embryos and regenerating transformed plant material from the secondary embryos; and

(d) obtaining a transformed *Allium* genus plant from the secondary embryo;
wherein the method of transforming is carried out without a passage through a callus phase.

2. **(CURRENTLY AMENDED)** The method according to claim 1 wherein the *Allium* genus plant is transformed by co-cultivation of *Allium* tissue with a strain of *Agrobacterium* containing a plasmid with a functional T-DNA region that is capable of transfer to plant cells ~~and that following this transformation, *Allium* tissue is regenerated by preferential selection.~~

3. **(PREVIOUSLY PRESENTED)** The method according to claim 1 or 2 in which the *Allium* genus plant is onion.

4. **(PREVIOUSLY PRESENTED)** The method according to claim 1 or 2 wherein the embryo cells are transformed using a binary vector.

5. **(PREVIOUSLY PRESENTED)** The method according to claim 1 in which the embryo cells are inoculated with an *Agrobacterium* strain containing a T-DNA active for transformation.

6. **(PREVIOUSLY PRESENTED)** The method according to claim 1 or 2 in which immature embryos are used.

7. **(CURRENTLY AMENDED)** A method of transforming an *Allium* genus plant using immature embryos as an explant source, comprising:

- (a) isolating immature embryos of the *Allium* genus plant to be transformed;
- (b) transforming the immature embryos by inoculating the immature embryos with an *Agrobacterium* strain and wounding the immature embryos in a culture medium, wherein transformation is achieved by:
 - (i) ~~transferring embryo tissue into~~ wounding the embryo cells and transferring the embryo cells into a preparation of *Agrobacterium*,
 - (ii) transferring the embryo cells from step (i) to solid medium, and
 - (iii) co-cultivating the embryo cells and the *Agrobacterium* attached to the embryo cells for 1-12 days from the end of step (ii);
- (c) transferring the immature embryos to a selective medium of P5 medium plus 10 mg/l geneticin and 200 mg/l timentin or 5 mg/l Basta and 200 mg/l timentin, or other appropriate selective ~~agents~~ agent to kill the agrobacteria and preferentially select the transgenic *Allium* cells;
- (d) culturing the immature embryos in the dark to produce secondary embryos;
- (e) selecting ~~putative~~ transgenic cultures of transgenic *Allium* cells from step (c) by preferential growth of the transgenic cells;
- (f) regenerating plants; and
- (g) producing a transformed *Allium* genus plant.

8. **(PREVIOUSLY PRESENTED)** The method according to claim 1 wherein the plant is transformed with an *Agrobacterium tumefaciens* strain containing a vector which carries a selectable DNA of interest.

9. **(PREVIOUSLY PRESENTED)** The method according to claim 8 in which the selectable DNA of interest confers herbicide resistance to the transformed plant.

10. **(CURRENTLY AMENDED)** The method according to claim 9 in which the DNA conferring herbicide resistance ~~DNA of interest~~ encodes bar resistance or glyphosate resistance.

11. **(CURRENTLY AMENDED)** The method according to claim 8 in which the selectable DNA ~~of interest is~~ encodes an antibiotic resistance ~~DNA of interest~~.

12. **(CURRENTLY AMENDED)** The method according to claim 11 in which the antibiotic resistance ~~DNA of interest is the~~ encodes *nptII* ~~DNA of interest~~.

13. **(CANCELED)**

14. **(PREVIOUSLY PRESENTED)** A transformed plant when produced by the method of claim 1.

15. (CANCELED)